DNR Division of Oil & Gas Well Data Submittal Requirement January, 2011

The lessee shall submit to the Alaska Department of Natural Resources all geological, geophysical and engineering data obtained from the lease within 30 days after completion, abandonment, or suspension of the well and within 30 days after completion or plugging of a well branch, if occurring at a different time. The lessee shall submit to the Alaska Department of Natural Resources data acquired subsequent to well completion within 30 days following acquisition of that data. The state may waive receipt of operational data from some development, service or injection wells. The state will inform the operator of the waiver prior to well completion.

The lessee shall submit the data to the Division of Oil and Gas, Department of Natural Resources.

The data shall include any and all of the following:

- 1. a copy of the well completion report (AOGCC form 10-407) with all attachments, including summaries of perforations open to production, production tests, core data, formation tops or geologic markers, and formation tests.
- 2. daily drilling reports or a summary report of daily drilling.
- 3. latitudinal and longitudinal coordinates (based on NAD-83 spheroid) for the completed surface and bottom hole locations, include locations for all plug-backs and pilot holes.
- 4. paper and digital copies of all directional surveys, include surveys for all plug-backs and pilot holes.
- 5. a summary list of all logs run and the depth interval covered by each, also list logs for all plug-backs and pilot holes.
- 6. a list of formations and other geologic markers encountered and the measured depths (MD) and true vertical depths (TVD) of each.
- 7. a summary of cored intervals (both conventional and sidewall), including depth, formation name, lithology, presence of oil, gas, gas hydrates, and water, porosity, fractures and apparent dips, indicate "**none**" in space provided on completion report or in an attachment if no cores were taken.
- 8. paper and digital copies of all core reports including lab analyses of lithology, porosity, permeability (vertical and horizontal, air and liquid), density, capillary pressure, and fluid saturation, if available.
- 9. paper and digital copies of all conventional and sidewall core photos (plain light and ultraviolet), if available.
- 10. identify depth and formation name for oil, gas and gas hydrate shows, indicate "**none**" on the completion report or in an attachment if no shows were observed.
- 11. identify zones of abnormal pressure, indicate "**none**" on the completion report or in an attachment if none were observed.
- 12. a synopsis or summary of testing and all fluid recovery efforts, including production tests (IP), drill stem tests (DST), wireline formation tests (i.e. repeat formation tests (RFT) and modular dynamics tests (MDT)), and other production and formation testing data; the summary should include test date, time, depth, formation name, method of operation, recovered fluid type(s) and amount(s), and fluid rate, gas-oil ratio (GOR), oil gravity, pressure, and choke size, when available. If no tests were undertaken, indicate "none" where appropriate on the completion report or in an attachment, if tests were undertaken but failed to recover fluids indicate "no recovery".
- 13. paper and digital copies of all pressure build-up, and fluid PVT analyses, if available.
- 14. copies of all open flow potential test reports and report attachments AOGCC Forms 10-421.
- 15. paper and digital copies of well test procedures, field chronologies, and field data; including details such as interval(s) open to test; volumes of oil, water and gas, BS&S=W, API gravity, gas density; wellhead and downhole pressure; and formation and wellhead temperature, necessary to fully evaluate the test data.
- 16. paper and digital copies of geochemical and formation fluid analyses and reports, if available.
- 17. down hole and surface fluid sampling procedures, field chronologies, raw data, and laboratory test results for all water and hydrocarbon-bearing zones (oil, gas, gas hydrates) sampled; including details necessary to fully evaluate quality of sample data
- 18. a copy of the permit to drill (AOGCC form 10-401) and the survey as-built of the well location.

- 19. paper copy (no sepia copies, please) of all final 2-inch open hole and cased hole logs, including measured depth (MD) and true-vertical depth (TVD) versions, specialty logs (such as Schlumberger's cyberlook, formation microscanners and dipmeter logs), measured-while-drilling (MWD) and logged-while-drilling (LWD) logs (in color, when available). Provide 5-inch scale logs when 2-inch scale logs are unavailable.
- 20. paper copy of final composite mud or lithology log and report, with lithology display, oil ,gas, and gas hydrate show indicators, and cuttings descriptions (in color, when available).
- 21. a digital version of well logs in LAS format on IBM format floppy disks, Zip100 disk, CD or DVD, and a digital version of final directional surveys in ASCII format (other formats may be acceptable upon agreement with the Division of Oil and Gas).
- 22. paper and digital (if available) copies of all well data and reports including, but not limited to, paleontology, palynology, petrography (including point-count analyses), X-ray diffraction analyses, SEM micrographs, thermal maturity, vitrinite reflectance, rock eval pyrolysis, geochronology, fission track analyses, fluid inclusion analyses, Mercury injection capillary pressure analyses, chemical analyses (EPMA, XRF, ICP, etc.), isotope analyses, water chemistry, burial and temperature history analyses, strain analyses, acoustic analyses, gas hydrate analyses and well pressure and temperature survey analyses.
- 23. all final reports of velocity, checkshot or VSP surveys (an ASCII format digital version of the above data shall also be submitted), including seismic profile data in SEG-Y format. Indicate "none" in your response to this request if no velocity, checkshot or VSP surveys were undertaken. Submission of velocity, checkshot, and VSP surveys are always required by DNR under the operator surface-use permit obligations.
- 24. paper and digital copies of all coalbed core, gas and water quality reports including lab analyses of core lithology, coal rank, vitrinite reflectance, maceral composition, TOC, ash, sulfer and BTU content, moisture content, cleating, adsorption/desorption data, residual gas measurements, porosity and permeability analyses, core photos, if available.
- 25. any other geoscience- and engineering-related data sets from the well(s).

All material should be either hand-carried by bonded courier or mailed by registered mail to:

Corazon Manaois, Resource Evaluation Section Alaska Department of Natural Resources, Division of Oil and Gas 550 W. 7th Avenue, Suite 1100 Anchorage, AK 99501-3510

Anchorage, AK 99501-3510 Telephone: (907)269-8772 Fax: (907)269-8942

Email: corazon.manaois@alaska.gov

The state may also require the lessee to submit additional data, summary reports, or a summary presentation of the well activity if requested in accordance with the applicable statutes and regulations in effect at the time of the drilling and completion of the well.

Any data submitted to the state by the lessee in connection with this lease will be available at all times for use by the state and its agents. The state will keep information confidential as provided in AS 38.05.035(a)(8) and its applicable regulations. In accordance with AS 38.05.035(a)(8)(C), in order for geological, geophysical and engineering data submitted under the lease agreement named above to be held confidential, the lessee must request confidentiality at the time the data is submitted by indicating "CONFIDENTIAL" on all confidential data items.

This action does not eliminate the need to file all data normally filed with the Alaska Oil and Gas Conservation Commission (AOGCC) under their permit requirements.